PEACE/WILLISTON
FISH & WILDLIFE
COMPENSATION
PROGRAM

Branham Slide 1995 Prescribed Burn

BC hydro

M. D. Wood
February 1996

BRITISH
COLUMBIA

PWFWCP Report No. 52

105-00957/

The Peace/Williston Fish & Wildlife Compensation Program is a cooperative venture of BC Hydro and the provincial fish and wildlife management agencies, supported by funding from BC Hydro. The Program was established to enhance and protect fish and wildlife resources affected by the construction of the W.A.C. Bennett and Peace Canyon dams on the Peace River, and the subsequent creation of the Williston and Dinosaur Reservoirs.

Peace/Williston Fish and Wildlife Compensation Program, 1011 Fourth Ave. 3rd Floor, Prince George B.C. V2L 3H9

Website: *www.bchydro.bc.ca/environment/initiatives/pwcp/*

This report has been approved by the Peace/Williston Fish and Wildlife Compensation Program Fish Technical Committee.

Citation: M. D. Wood. February 1996. Branham Slide 1995 prescribed burn. Peace/Williston Fish and Wildlife Compensation Program, Report No. 52. 5pp.

Author(s): Mari D. Wood[1]
Address(es): [1] Peace/Williston Fish and Wildlife Compensation Program, 1011 Fourth Ave., 3rd Floor Prince George, B.C. V2L 3H9

BACKGROUND AND OBJECTIVES

On May 7, 1995, a prescribed burn was conducted at Branham Slide on the north side of the Peace Arm of the Williston Reservoir. The primary objective for burning the south facing deciduous slopes was to increase the availability and quality of winter and spring forage for ungulates. The area receives moderate use by Stone's sheep, elk, mule deer and moose, and has the potential to support high use by these species given increased forage availability and quality.

Prescribed burning of the approximately 1300 hectare area (site A7) at Branham Slide was attempted in the spring of 1992, and resulted in small patches burned (totaling about 225 hectares). Site A7 was targeted for burning again in the spring of 1993 in hopes of achieving greater burn coverage. Three attempts to burn the site resulted in about 270 hectares burned in small patches, primarily in the western half of the site (Wood, 1996). Although small and patchy in nature, the 1992 and 1993 burns helped to increase fuel loads on the site for subsequent burns.

AREA DESCRIPTION:

Branham Slide lies between Schooler Creek and Adams Creek on the north side of the Peace Arm of the Williston Reservoir (Figure 1). The targeted burn area, site A7 (1300 ha), is bordered by Horseshoe Hill Creek on the west, and Adams Creek on the east (Figure 2). It falls within the Boreal White and Black Spruce (BWBSwk1) and Engelmann Spruce-Subalpine Fir (ESSFmv4) biogeoclimatic zones between 600 and 1300 metres in elevation, with a southeast aspect and a moderate 25-30% slope. Overmature aspen predominated on the site, with some small pockets of spruce in the west on areas of slightly wetter relief. There was very little understory vegetation and coarse woody debris, but the patchy 1992 and 1993 burns increased the fuel loading in some areas.

The area is rated as Class 1, 2, and 3 winter range for moose, elk, Stone's sheep and mule deer (Backmeyer, 1994b). In the early 1980's, only a small herd of about 20 Rocky Mountain elk were known to inhabit the slopes along the north shore of the Reservoir (Churchill, 1984). A transplant of elk to the area was proposed, and in 1985, 107 elk were transported from the East Kootenays and released at Dunlevy Lake, about 12 km east of Branham Slide (Churchill, 1987). An additional 38 elk from the East Kootenays were released in the same area in 1987 (Harper, 1987). Prescribed burns in the Dunlevy and Aylard areas were conducted in the late 1980's to enhance forage production for the elk and other ungulates in the area. Burns have since been conducted at Branham Slide (1992, 1993, 1995) and at Butler Ridge (1994) (Zemlak et al, 1995). Incidental sightings and recent aerial surveys indicate a significant increase in the population of elk along the north shore of the Reservoir (Backmeyer, 1994a).

Figure 1. Branham Slide prescribed burn site.

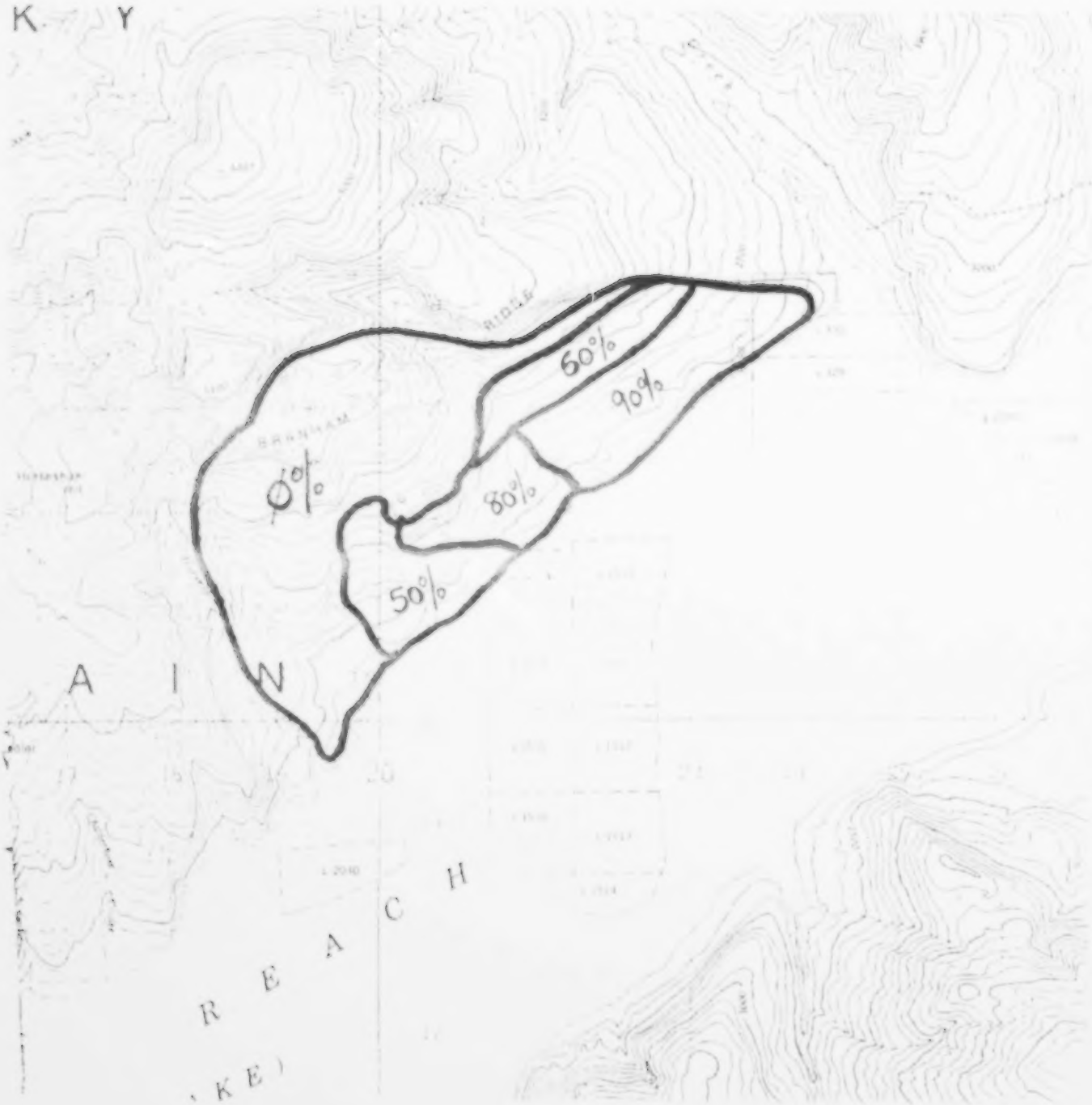

Figure 2. Proposed burn site A7, and areas burned in 1995 with approx. % burn coverage achieved.

BURN DETAILS:

Pre-burn preparations at the Branham Slide site included the construction of helipads in 1992 by contracted crews, and annual aerial pre-burn surveys of the targeted burn area. Pre-burning was determined not to be required as the site was protected from fire escape by creek draws and ridges.

Site A7 was ignited at 1:30 pm on May 7, 1995 using 6000-7000 AIDS balls released from a Bell 206 helicopter in several passes (Table 1). Ice was still present on the Reservoir at the time, although patches of open water were visible. Skies were clear and sunny with some high light cloud. Ignition commenced close to the Reservoir at the far eastern end of site A7. Two parallel passes were then conducted across the main part of the eastern half of the burn: one across the middle and one closer to the Reservoir edge. Two more passes were made across the smaller, steeper slopes above. When the eastern half was burning well with a good convection column, the middle section of A7 was then ignited in three passes from the Reservoir upslope. In the far western section of the burn where mature aspen exists and fuel loads are low, AID's balls were released in a patchy pattern in areas with some fuel concentrations.

Table 1. Ignition details at Branham Slide burn site A7 on May 7, 1995.

Time of Ignition	Temp (°C) (dry)	Temp (°C) (wet)	Relative Humidity	Wind (km/hr)	# AIDS balls
1:30 pm	18	10	32%	0-5 (SW)	6-7000

The burn resulted in approximately half of the targeted area being burned (600 hectares) (Figure 2). Favourable weather conditions and an increased fuel load from previous patchy burns contributed to the success of the burn which achieved more thorough coverage of the area than in the past. The total cost of conducting the burns was $18,566 (Table 2).

Table 2. Branham burn cost breakdown.

Pre-burn Assess	Aircraft	AIDS balls	Mop-up Crew	PWCP Staff Wages	Travel & Accom	Post-burn Monitor	Other	TOTAL
0	11,105	0	5,701	300	0	1,760	0	$18,866

The prescribed burn at Branham Slide was conducted by B.C. Environment staff in Fort St. John, with the approval and co-operation of the Dawson Creek Forest District. Funding for the burn was supplied by the Peace/Williston Fish and Wildlife Compensation Program (PWCP).

FUTURE MONITORING:

The Peace/Williston Compensation Program attempts to conduct prescribed burns on a annual basis, alternating between the Mackenzie and Dawson Creek Forest Districts. The response of vegetation to these prescribed fires will be monitored at one site within the Dawson Creek Forest District, and two sites in the Mackenzie Forest District (one in the north and one in the south). In the Dawson Creek Forest District, the Butler Ridge site along the Peace Arm has been selected for long-term vegetation monitoring. Grass production as a result of prescribed burning benefits grazers such as Stone's sheep and elk, while aspen, willow and shrubs will provide browse for moose and mule deer. Vegetation plots monitored over time will reveal changes in the vegetation structure and diversity in burned and unburned areas.

LITERATURE CITED

Backmeyer, R.D. 1994. Peace Arm elk study. Technical Report. Prepared for Peace/Williston Compensation Program, Prince George, B.C. 21 pp.

Backmeyer, R.D. 1994b. Peace Arm Williston Lake wildlife capability ratings. Working Report. Prepared for Peace/Williston Compensation Program, Prince George, B.C. 5 pp plus appendices.

Churchill, B. 1987. North Shore Williston Lake Rocky Mountain elk transplant progress report to January 31, 1987. Unpublished report. B.C Environment, Fort St. John, B.C.

Churchill B. 1984. A proposal for a supplementary transplant of Rocky Mountain elk to the North Shore of Williston Lake. Unpublished report. B.C Environment, Fort St. John, B.C.

Harper, F. 1987. Williston Lake Rocky Mountain elk transplant. Internal files. B.C. Environment, Fort St. John, B.C.

Wood, M.D. 1996. Branham Slide 1993 prescribed burn. Status Report. Peace/Williston Fish and Wildlife Compensation Program, Prince George, B.C. 5 pp.

Zemlak, R.J., M.D. Wood, and F.B. Corbould. 1995. A review of habitat enhancement activities conducted in the Williston Reservoir watershed, 1989-1994. Draft Working Report. Prepared for the Peace/Williston Compensation Program, Prince George, B.C. 22 pp.